

AMENDMENTS TO THE CLAIMS

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

1 1-30 (Canceled).

1 31. (Currently amended) A method for controlling rippling caused by
2 optical proximity correction during an optical lithography process used in
3 manufacturing an integrated circuit, comprising:
4 selecting a first evaluation point for a given segment that is part of an edge
5 in a layout of the integrated circuit;
6 selecting a second evaluation point for the given segment;
7 computing a first deviation from a target location for the given segment at
8 the first evaluation point;
9 computing a second deviation for the given segment at the second
10 evaluation point; and
11 ~~adjusting a bias controlling rippling~~ for the given segment, if necessary,
12 based upon a measurement of rippling computed from multiple deviations at
13 multiple evaluation points, including the first deviation at the first evaluation
14 point and the second deviation at the second evaluation point, wherein controlling
15 rippling involves breaking the given segments into multiple segments in order to
16 control ripple.

1 32. (Original) The method of claim 31, wherein the second evaluation
2 point is a supplemental evaluation point.

1 33. (Original) The method of claim 31, wherein both the first evaluation
2 point and the second evaluation point are located on the given segment.

1 34. (Original) The method of claim 31, wherein the first evaluation point
2 is located on the given segment and the second evaluation point is located on an
3 adjacent segment.

1 35. (Original) The method of claim 31, further comprising adjusting the
2 bias, if necessary, for each segment that is part of the layout of the integrated
3 circuit.

1 36. (Original) The method of claim 31, further comprising:
2 selecting a third evaluation point for the given segment; and
3 computing a third deviation for the given segment at the third evaluation
4 point;
5 wherein adjusting the bias for the given segment involves considering the
6 third deviation at the third evaluation point.

1 37. (Original) The method of claim 31, wherein computing the first
2 deviation involves using a model-based technique for computing the first
3 deviation.

1 38. (Currently amended) A computer-readable storage medium storing
2 instructions that when executed by a computer cause the computer to perform a
3 method for controlling rippling caused by optical proximity correction during an
4 optical lithography process used in manufacturing an integrated circuit, the
5 method comprising:

6 selecting a first evaluation point for a given segment that is part of an edge
7 in a layout of the integrated circuit;
8 selecting a second evaluation point for the given segment;
9 computing a first deviation from a target location for the given segment at
10 the first evaluation point;
11 computing a second deviation for the given segment at the second
12 evaluation point; and
13 ~~adjusting a bias~~ controlling rippling for the given segment, if necessary,
14 based upon a measurement of rippling computed from multiple deviations at
15 multiple evaluation points, including the first deviation at the first evaluation
16 point and the second deviation at the second evaluation point, wherein controlling
17 rippling involves breaking the given segments into multiple segments in order to
18 control ripple.

1 39. (Original) The computer-readable storage medium of claim 38,
2 wherein the second evaluation point is a supplemental evaluation point.

1 40. (Original) The computer-readable storage medium of claim 38,
2 wherein both the first evaluation point and the second evaluation point are located
3 on the given segment.

1 41. (Original) The computer-readable storage medium of claim 38,
2 wherein the first evaluation point is located on the given segment and the second
3 evaluation point is located on an adjacent segment.

1 42. (Original) The computer-readable storage medium of claim 38,
2 wherein the method further comprises adjusting the bias, if necessary, for each
3 segment that is part of the layout of the integrated circuit.

1 43. (Original) The computer-readable storage medium of claim 38,
2 wherein the method further comprises:
3 selecting a third evaluation point for the given segment; and
4 computing a third deviation for the given segment at the third evaluation
5 point;
6 wherein adjusting the bias for the given segment involves considering the
7 third deviation at the third evaluation point.

1 44. (Original) The computer-readable storage medium of claim 38,
2 wherein computing the first deviation involves using a model-based technique for
3 computing the first deviation.

1 45. (Currently amended) An apparatus for controlling rippling caused by
2 optical proximity correction during an optical lithography process used in
3 manufacturing an integrated circuit, comprising:
4 a selection mechanism that is configured to,
5 select a first evaluation point for a given segment that is
6 part of an edge in a layout of the integrated circuit, and to
7 select a second evaluation point for the given segment;
8 a deviation computing mechanism that is configured to,
9 compute a first deviation from a target location for the
10 given segment at the first evaluation point, and to
11 compute a second deviation for the given segment at the
12 second evaluation point; and
13 a ~~bias adjustment~~ ripple controlling mechanism that is configured to adjust
14 ~~a bias control ripple~~ for the given segment, if necessary, based upon a
15 measurement of rippling computed from multiple deviations at multiple
16 evaluation points, including the first deviation at the first evaluation point and the

17 | second deviation at the second evaluation point, wherein controlling rippling
18 | involves breaking the given segments into multiple segments in order to control
19 | ripple.

1 46. (Original) The apparatus of claim 45, wherein the second evaluation
2 point is a supplemental evaluation point.

1 47. (Original) The apparatus of claim 45, wherein both the first evaluation
2 point and the second evaluation point are located on the given segment.

1 48. (Original) The apparatus of claim 45, wherein the first evaluation point
2 is located on the given segment and the second evaluation point is located on an
3 adjacent segment.

1 49. (Original) The apparatus of claim 45, wherein the bias adjustment
2 mechanism is configured to adjust the bias, if necessary, for each segment that is
3 part of the layout of the integrated circuit.

1 50. (Original) The apparatus of claim 45,
2 wherein the selection mechanism is additionally configured to select a
3 third evaluation point for the given segment; and
4 wherein the deviation computing mechanism is additionally configured to
5 compute a third deviation for the given segment at the third evaluation point;
6 wherein the bias adjustment mechanism is configured to consider the third
7 deviation at the third evaluation point in adjusting the bias for the given segment
8 involves.

1 51. (Original) The apparatus of claim 45, wherein the deviation computing
2 mechanism is configured to compute use a model-based technique in computing
3 the first deviation.

1 52. (Currently amended) A mask to be used in an optical lithography
2 process for manufacturing an integrated circuit, wherein the mask is created
3 through a process that controls rippling caused by optical proximity correction, the
4 process comprising:
5 selecting a first evaluation point for a given segment that is part of an edge
6 in a layout of the integrated circuit;
7 selecting a second evaluation point for the given segment;
8 computing a first deviation from a target location for the given segment at
9 the first evaluation point;
10 computing a second deviation for the given segment at the second
11 evaluation point; and
12 ~~adjusting a bias~~ controlling rippling for the given segment, if necessary,
13 based upon a measurement of rippling computed from multiple deviations at
14 multiple evaluation points, including the first deviation at the first evaluation
15 point and the second deviation at the second evaluation point, wherein controlling
16 rippling involves breaking the given segments into multiple segments in order to
17 control ripple.

1 53. (Currently amended) An integrated circuit created through a process
2 that controls rippling caused by optical proximity correction during an optical
3 lithography process used in manufacturing the integrated circuit, the process
4 comprising:
5 selecting a first evaluation point for a given segment that is part of an edge
6 in a layout of the integrated circuit;

7 selecting a second evaluation point for the given segment;
8 computing a first deviation from a target location for the given segment at
9 the first evaluation point;
10 computing a second deviation for the given segment at the second
11 evaluation point; and
12 ~~adjusting a bias~~controlling rippling for the given segment, if necessary,
13 based upon a measurement of rippling computed from multiple deviations at
14 multiple evaluation points, including the first deviation at the first evaluation
15 point and the second deviation at the second evaluation point, wherein controlling
16 rippling involves breaking the given segments into multiple segments in order to
17 control ripple.

1 54. (Currently amended) A means for controlling rippling caused by
2 optical proximity correction during an optical lithography process used in
3 manufacturing an integrated circuit, comprising:
4 a selection means for,
5 selecting a first evaluation point for a given segment that is
6 part of an edge in a layout of the integrated circuit, and for
7 selecting a second evaluation point for the given segment;
8 a deviation computing means for,
9 computing a first deviation from a target location for the
10 given segment at the first evaluation point, and for
11 computing a second deviation for the given segment at the
12 second evaluation point; and
13 ~~a bias adjustment~~ripple controlling means for ~~adjusting a bias~~controlling
14 ripple for the given segment, if necessary, based upon a measurement of rippling
15 computed from multiple deviations at multiple evaluation points, including the
16 first deviation at the first evaluation point and the second deviation at the second

- 17 | evaluation point, wherein controlling rippling involves breaking the given
18 | segments into multiple segments in order to control ripple.